

InFocus IN112a/IN114a/IN114STa/IN116a/IN118HDa/IN112aT/IN114aT RS232 Control Instructions

Serial Communication Configuration

To control this projector via RS-232, connect a null modem cable and set the control system serial port settings to match the following communication configuration.

When Power Saving Mode is enabled and the projector turned off, the projector will echo commands. It will not echo when on or if Power Saving Mode is disabled.

Bits per second	9600
Data bits	8
Parity	None
Stop bits	1
Flow control	None

Command Format

All commands consist of 3 alpha characters followed by a request, all enclosed in parentheses. The request can be a read request (indicated by a "?") or a write request (indicated by 1 to 4 ASCII digits).

Error Conditions

Not all commands consist of 3 alpha characters followed by a request, all enclosed in parentheses. The request can be a read request (indicated by a "?") or a write request (indicated by 1 to 4 ASCII digits).

Read Requests

A read command returns a text string or the range and the current setting, for example:

Function	Command	Returns
Volume	(VOL?)	(0-20, 12)
Source	(SRC?)	(0-22, 2)
Lamp Hours	(LMP?)	(0-9999, 42)
Max Lamp Life	(LIF?)	("5000")

Write Requests

Some commands have ranges, while others are absolute. If a number greater or less than the maximum range is received, it will return an error "?".

Function	Command	Returns
Power	(PWR1)	Turns the projector on
Source	(SRC0)	Switches to VGA1
Ceiling Set	(CEL1)	Turns on Ceiling mode
Volume	(VOL+)	Increases volume 1 step

Write/Read Requests

Most commands have a "& Return" option you can use by adding a "!" before the final parenthesis. This will add a read command after the write command has been processed. For example, (PWR1!) would be equivalent to entering (PWR1)(PWR?).

Function	Command	Returns
Power	(PWR0!)	Turns the projector off
Source	(SRC5!)	Switches to HDMI
Keystone	(DKH20!)	Sets keystone to +20
Color Space	(CSM2!)	Sets Color Space to REC601

Timing Limitations

If you enter a command inside the timing parameters below, you may receive an error response and your command will not be processed.

- 10 second delay after lamp ignition
- 3 second delay after changing sources
- 10 second delay after a power down
- 5ms Inter-command delay
- 2ms Inter-character delay

Command List

3D Set	Command	return code (OK)
Status ?	(TDI?)	(0-1,n) n=0,1
OFF	(TDI0)	
Auto	(TDI1)	
Top-Bottom	(TDI2)	
Frame Sequential	(TDI3)	
Frame Packing	(TDI4)	
Side-by-Side	(TDI5)	
OFF & return	(TDI0!)	(0-5,0)
Auto & return	(TDI1!)	(0-5,1)
Top-Bottom & return	(TDI2!)	(0-5,2)
Frame Sequential & return	(TDI3!)	(0-5,3)
Frame Packing & return	(TDI4!)	(0-5,4)
Side-by-Side & return	(TDI5!)	(0-5,5)

Aspect Ratio	Command	Return code
Status ?	(ARZ?)	(0-6,n) n=0,1,2,3,4,6
Auto	(ARZ0)	
Native	(ARZ1)	
4 X 3	(ARZ2)	
16 X 9	(ARZ3)	
Letterbox	(ARZ4)	
16 X 10	(ARZ6)	
Auto & return	(ARZ0!)	(0-6,0)
Native & return	(ARZ1!)	(0-6,1)
4 X 3 & return	(ARZ2!)	(0-6,2)
16 X 9 & return	(ARZ3!)	(0-6,3)
Letterbox & return	(ARZ4!)	(0-6,4)
16 X 10 & return	(ARZ6!)	(0-6,6)

Auto Image	Command	Return code
Execute	(AIM1)	

Auto Source	Command	Return code
Status ?	(ASC?)	(0-1,n) n=0,1
ON	(ASC1)	
OFF	(ASC0)	
ON & return	(ASC1!)	(0-1,1)
OFF & return	(ASC0!)	(0-1,0)

Blank Key	Command	Return code
Status ?	(BLK?)	(0-1,n) n=0,1
ON	(BLK1)	
OFF	(BLK0)	
ON & return	(BLK1!)	(0-1,1)
OFF & return	(BLK0!)	(0-1,0)

Blank Screen	Command	Return code
Status ?	(BSS?)	(0-6,n) n=0,3,4,5
Blue Screen	(BSS0)	
Black Screen	(BSS3)	
White Screen	(BSS4)	
Factory LOGO	(BSS5)	
Blue Screen & return	(BSS0!)	(0-6,0)
Black Screen & return	(BSS3!)	(0-6,3)
White Screen & return	(BSS4!)	(0-6,4)
Factory LOGO & return	(BSS5!)	(0-6,5)

Ceiling Mode	Command	Return code
Status ?	(CEL?)	(0-1,n) n=0,1
ON	(CEL1)	
OFF	(CELO)	
ON & return	(CEL1!)	(0-1,1)
OFF & return	(CELO!)	(0-1,0)

Color space	Command	Return code
Status ?	(CSM?)	(0-4,n) n=0-4
RBG	(CSM0)	
REC709	(CSM1)	
REC601	(CSM2)	
RGB Video	(CSM3)	
Auto	(CSM4)	
RBG & return	(CSM0!)	(0-4,0)
REC709 & return	(CSM1!)	(0-4,1)
REC601 & return	(CSM2!)	(0-4,2)
RGB Video & return	(CSM3!)	(0-4,3)
Auto & return	(CSM4!)	(0-4,4)

Detect Film	Command	Return code
Status ?	(TTO?)	(0-1,n) n=0,1
ON	(TTO1)	
OFF	(TTO0)	
ON & return	(TTO1!)	(0-1,1)
OFF & return	(TTO0!)	(0-1,0)

Factory Reset	Command	Return code
Execute	(RST1)	

Firmware Version	Command	Return code
Status ?	(FVS?)	(nnnn) n=x.xx

KEY Command	Command	Return code
Menu	(KEY2)	NA
Increases Brightness	(KEY3)	NA
Decreases Volume	(KEY4)	NA
Decreases Brightness	(KEY7)	NA
Increases volume	(KEY8)	NA
Toggles help menu	(KEY10)	NA
Moves menu cursor left	(KEY11)	NA
Moves menu cursor right	(KEY12)	NA
Toggles freeze state on or off	(KEY14)	NA
Opens Source Menu	(KEY16)	NA
Moves menu cursor left	(KEY17)	NA
Moves menu cursor right	(KEY18)	NA
Moves menu cursor up	(KEY19)	NA

Moves menu cursor down	(KEY20)	NA
Toggles power state on or off	(KEY23)	NA
Selects next available computer source	(KEY25)	NA
Selects next available video source	(KEY26)	NA
Increases keystone	(KEY32)	NA
Decreases keystone	(KEY33)	NA
Moves to next slide in Powerpoint (sends PageUp via USB)	(KEY36)	NA
Moves to previous slide in Powerpoint (sends PageDn via USB)	(KEY37)	NA
Increases Magnify ratio	(KEY38)	NA
Decreases Magnify ratio	(KEY39)	NA
Toggles Magnify state on or off	(KEY40)	NA
Toggles audio mute state on or off	(KEY41)	NA
Toggles Audio Video mute	(KEY42)	NA
Performs programmed action of Custom Key	(KEY43)	NA
Toggles through available presets	(KEY44)	NA
Toggles state of blank screen on or off	(KEY49)	NA
Selects current menu item	(KEY50)	NA
Activates automatic image re-acquisition	(KEY51)	NA
Toggles through available resize modes	(KEY52)	NA
Toggles overscan state on or off	(KEY53)	NA
Commands the system to power down	(KEY57)	NA
Commands the system to power up	(KEY58)	NA
Selects the Native aspect ratio	(KEY59)	NA
Selects the 16:9 aspect ratio	(KEY60)	NA
Selects the 4:3 aspect ratio	(KEY61)	NA
Selects the Letterbox aspect ratio	(KEY62)	NA
Turns off the blank screen	(KEY67)	NA
Turns on the blank screen	(KEY68)	NA
Selects the Auto aspect ratio	(KEY69)	NA
Selects the 16:10 aspect ratio	(KEY71)	NA

Keypad Lock	Command	Return code
Status ?	(KPE?)	(0-1,n) n=0,1
Unlock	(KPE1)	
Locked	(KPE0)	
Unlock & return	(KPE1!)	(0-1,1)
Locked & return	(KPE0!)	(0-1,0)

Keypad Navigation	Command	Return code
Menu	(NAV0)	
Up	(NAV1)	
Down	(NAV2)	
Select	(NAV3)	
Left	(NAV4)	
Right	(NAV5)	

Keystone	Command	Return code
Status ?	(DKH?)	(-40,40,nnn) n=-40 ~ 40
Keystone +	(DKH+)	
Keystone -	(DKH-)	
Set keystone	(DKHnnn) n=-40 ~ 40	
Keystone + & return	(DKH+!)	(-40,40,nnn) n=-40 ~ 40
Keystone - & return	(DKH-!)	(-40,40,nnn) n=-40 ~ 40
Set keystone & return	(DKHnnn!) n=-40 ~ 40	(-40,40,nnn) n=-40 ~ 40

Lamp Hours - All Lamps	Command	Return code
Status ?	(LMT?)	(nnnn) n=lamp hours

Lamp Hours - Current Lamp	Command	Return code
Status ?	(LMP?)	(nnnn) n=lamp hours

Lamp Hours at ECO Power - All Lamps	Command	Return code
Status ?	(LTE?)	(nnnn) n=lamp hours

Lamp Hours at ECO Power - Current Lamp	Command	Return code
Status ?	(LME?)	(nnnn) n=lamp hours

Lamp Hours at Normal Power - All Lamps	Command	Return code
Status ?	(LTO?)	(nnnn) n=lamp hours

Lamp Hours at Normal Power - Current Lamp	Command	Return code
Status ?	(LMO?)	(nnnn) n=lamp hours

Lamp Hours in ECO Blank Mode - All Lamps	Command	Return code
Status ?	(LTL?)	(nnnn) n=lamp hours

Lamp Hours in ECO Blank Mode - Current	Command	Return code
Status ?	(LML?)	(nnnn) n=lamp hours

Lamp Hours Reset	Command	Return code
Execute	(LRT1)	

Lamp Hours Reset Time	Command	Return code
Status ?	(LMR?)	(nnnn) n=lamp hours

Lamp Life (Maximum)	Command	Return code
Status ?	(LIF?)	(nnnn) n=lamp hours

Lamp Power	Command	Return code
Status ?	(IPM?)	(0-1,n) n=0,1
Low Power (Eco Mode)	(IPM1)	
Normal Power	(IPM0)	
Low Power (Eco Mode) & return	(IPM1!)	(0-1,1)
Normal Power & return	(IPM0!)	(0-1,0)

Language	Command	return code (OK)
Status ?	(LAN?)	(0-25,n) n=0~25
English	(LAN0)	
French	(LAN1)	
German	(LAN2)	
Italian	(LAN3)	
Korean	(LAN5)	
Norwegian	(LAN6)	
Portuguese	(LAN7)	
Russian	(LAN8)	
Simplified Chinese	(LAN9)	
Spanish	(LAN10)	
Traditional Chinese	(LAN11)	
Swedish	(LAN12)	
Dutch	(LAN13)	
Polish	(LAN14)	
Turkish	(LAN15)	
Danish	(LAN16)	
Finnish	(LAN17)	
Arabic	(LAN19)	
Vietnamese	(LAN20)	
Bahasa Indonesian	(LAN21)	
Czech	(LAN22)	
Hungarian	(LAN23)	
Romanian	(LAN24)	
Farsi	(LAN25)	
English & return	(LAN0!)	(0-25,0)
French & return	(LAN1!)	(0-25,1)
German & return	(LAN2!)	(0-25,2)
Italian & return	(LAN3!)	(0-25,3)
Korean & return	(LAN5!)	(0-25,5)
Norwegian & return	(LAN6!)	(0-25,6)
Portuguese & return	(LAN7!)	(0-25,7)
Russian & return	(LAN8!)	(0-25,8)

Simplified Chinese & return	(LAN9!)	(0-25,9)
Spanish & return	(LAN10!)	(0-25,10)
Traditional Chinese & return	(LAN11!)	(0-25,11)
Swedish & return	(LAN12!)	(0-25,12)
Dutch & return	(LAN13!)	(0-25,13)
Polish & return	(LAN14!)	(0-25,14)
Turkish & return	(LAN15!)	(0-25,15)
Danish & return	(LAN16!)	(0-25,16)
Finnish & return	(LAN17!)	(0-25,17)
Arabic & return	(LAN18!)	(0-25,19)
Vietnamese & return	(LAN20!)	(0-25,20)
Bahasa Indonesian & return	(LAN21!)	(0-25,21)
Czech & return	(LAN22!)	(0-25,22)
Hungarian & return	(LAN23!)	(0-25,23)
Romanian & return	(LAN24!)	(0-25,24)
Farsi & return	(LAN25!)	(0-25,25)

Menu (OSD) Status	Command	Return code
Status ?	(MNU?)	(0-1,n) n=0,1
ON	(MNU1)	
OFF	(MNU0)	
ON & return	(MNU1!)	(0-1,1)
OFF & return	(MNU0!)	(0-1,0)

Message	Command	Return code
Status ?	(DMG?)	(0-1,n) n=0,1
ON	(DMG1)	
OFF	(DMG0)	
ON & return	(DMG1!)	(0-1,1)
OFF & return	(DMG0!)	(0-1,0)

Model Name	Command	Return code
Status ?	(MDL?)	(nnnn) n=112,114,116

Mute	Command	Return code
Status ?	(MTE?)	(0-1,n) n=0,1
ON	(MTE1)	
OFF	(MTE0)	
ON & return	(MTE1!)	(0-1,1)
OFF & return	(MTE0!)	(0-1,0)

Power	Command	Return code
Status ?	(PWR?)	(0-1,n) n=0,1
ON	(PWR1)	
OFF	(PWR0)	
ON & return	(PWR1!)	(0-1,1)
OFF & return	(PWR0!)	(0-1,0)

Source	Command	Return code
Status ?	(SRC?)	(0-22,n) n=0-22
Next Source	(SRC+)	
Previous Source	(SRC-)	
VGA1	(SRC0)	
VGA2	(SRC1)	
VIDEO	(SRC12)	
S-VIDEO	(SRC13)	
HDMI	(SRC5)	
Next Source & return	(SRC+!)	(0-22,n) n=0-22
Previous Source & return	(SRC-!)	(0-22,n) n=0-22
VGA1 & return	(SRC0!)	(0-22,0)
VGA2 & return	(SRC1!)	(0-22,1)
VIDEO & return	(SRC12!)	(0-22,12)
S-VIDEO & return	(SRC13!)	(0-22,13)
HDMI & return	(SRC5!)	(0-22,5)

Timer	Command	Return code
Status ?	(AOT?)	(0-6,n) n=0-6
Never	(AOT0)	
5 Min	(AOT1)	
10 Min	(AOT2)	
15 Min	(AOT3)	
20 Min	(AOT4)	
25 Min	(AOT5)	
30 Min	(AOT6)	
Never & return	(AOT0!)	(0-6,0)
5 Min & return	(AOT1!)	(0-6,1)
10 Min & return	(AOT2!)	(0-6,2)
15 Min & return	(AOT3!)	(0-6,3)
20 Min & return	(AOT4!)	(0-6,4)
25 Min & return	(AOT5!)	(0-6,5)
30 Min & return	(AOT6!)	(0-6,6)

Volume	Command	Return code
Status ?	(VOL?)	(0,20,nn) n=0~20
Volume +	(VOL+)	
Volume -	(VOL-)	
Set volume	(VOLnn) n=0 ~ 20	
Volume + & return	(VOL+!)	(0,20,nn) n=0~20
Volume - & return	(VOL-!)	(0,20,nn) n=0~20
Set volume & return	(VOLnn!) n=0 ~ 20	(0,20,nn) n=0~20